Automated Video Quality Testing Solution

Overview

Video services can be broadly classified into two categories: Video Broadcasting or streaming, and Video Conferencing. Video broadcasting is essentially a one-way application, downstream to the consumer, and Video Conferencing, is basically a two-way web-based interactive application, much like voice, with simultaneous upstream and downstream for communications over IP. Consumer applications such as Google Hangouts, Apple Facetime, Skype, and Enterprise solutions from Cisco, Polycom, BlueJeans, are some examples.

Along with existing voice, and data quality test solution, GL’s VQuad™ now adds the ability to test, and measure video services over IP, and Wireless networks to determine the performance of a video call.

VQuad™ or NetTestApp on Android devices can initiate, control, and perform the entire video conferencing testing with the support of Video Controller/Server and Video Clients (Agents). The Smartphones (Android) and PCs (both Windows and Linux) become the agents or end points. Testing can be done between any two agents, Android-to-Android, Android-to-PC, or PC-to-PC, specifying all the required characteristics of a Video test. GL’s VQuad™ scripting provides portability, mobility, remote accessibility, centralized analysis and data retrieval, which are just a few attributes of GL’s next generation Voice, Video, and Data Testing solution.

Video test results include Video MOS, Audio MOS, and A/V MOS along with a variety of analytical metrics and quality metrics. All the video/audio test results and events can be automatically sent to the Central Database. Using WebViewer™, query and display these results, statistics, status, and even plot Pass/Fail results directly on Google Maps.

For complete details, visit http://www.gl.com/automated-video-quality-testing.html webpage.

Features

- Supports Android, Windows, and Linux video end client devices
- Supports both manual and automated (scripted) video testing within VQuad™
- Monitor Audio/Video Quality in Real-time
- Monitor service level compliance with SLAs
- Perform pre-deployment service testing
- Unlimited test plans configurations with Codec, Frame Rate, Bandwidth, Latency, GoP (Group of Pictures) Structure and Video Resolution
- Test results include Video Quality (Relative MOS-V), Audio Quality (Relative MOS-A), Audio Video Quality (Relative MOS-AV), IP Network condition parameters, Signaling Performance, and Call Config Info
- Initiate multiple (consecutive and/or concurrent) IP video calls between licensed agents
- Customized, consolidated, and interactive charts showing quality and diagnostic metrics
- Supported on Linux/CentOS, Windows 7 / 8 / 10 (32, 64 bit) systems.

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**Video Tests from VQuad™**

Video tests can be performed manually between 2 end points or completely automated using the flexible and versatile VQuad™ scripts.

**Manual Video Tests from VQuad™**

Manual video tests can be configured by connecting to the VAC server and optionally to the Central DB to send the results directly to the central location for display in Webviewer™. Licensed Test Agents, Test Plans, and Interface test parameters are dynamically set once connected to the VAC Server. However, users can also manually get the test parameters from the ini configuration file and set the source and destination end points to run the test.

**Automated Video Tests from VQuad™**

VQuad™ scripting provides automation capability, remote accessibility, analysis and centralized data retrieval, which are just a few attributes of GL’s next generation Voice, Video, and Data Testing solution. Using VQuad™ scripts the video tests can be automated on multiple devices, the status and results for all the connected devices can be viewed in the VAC Test Events log.

**Video Application Controller (VAC™)**

Video Application Controller (VAC) allows VQuad™ and NetTest applications to use the web services of the VAC Server to automate and control all active Video Test Agents such as to start/stop tests and to obtain the corresponding results.

User has an option to configure unlimited Video Test Agents such as to start/stop tests and to obtain the corresponding results.

- Video Codecs supported are JPEG, H.261, H.263, H.263+, H.264, MPEG, MPEG-2, MPEG-4, VC1
- Video Frame rate used for the test can range from 5 fps up to 60 fps
- One to one chat bandwidth of at least 1 Mbps uplink / 1 Mbps downlink; One to many chat may require at least 1 Mbps uplink / 2 Mbps downlink; more bandwidth will be required for better quality
- Minimal one way latency of 150 to 300 ms is needed to avoid double talk, this is independent of video quality
- Resolution (Image size) can vary from - 320 x 240 pixels, 15 frames/sec, 640 x 480 pixels, 30 fps, to 1280 x 780 pixels, 30 fps
- Acoustic echo cancellation is necessary if speakerphones are used to improve audio quality
- Group of Pages (GOP) structure – a group of frames are treated together to achieve greater compression
**Video Results Display in VQuad™ Central Database**

The video test results from VQuad™, VAC, or MDC are automatically sent to the VQuad™ Central Database and can be viewed/queried using the GL™’s WebViewer™ (web browser).

- Multi-user support, and user-friendly interfaces are remotely accessible via browser based clients
- Central Database query via web interface to display results in both tabular and graphical formats.
- Results also include Video test results such as Video MOS, Audio MOS, and Audio/Video MOS along with a variety of analytical metrics and quality metrics
- Filter results using user-defined search criteria.
- Customized Reports and test statistics.
- Google Mapping for all the Results and Events along with Mobile Device information for the available GPS co-ordinates

**WebViewer™ Video Test Results View**

**Google Mapping Test Results**

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Buyer’s Guide

**VQT650** – VAC (includes VAC Server and VAC companion software)

**VQT661** – VAC Windows/Linux Agent, single license, 5Mbps

**VQT662** - VAC Windows/Linux Agent, single license, 10Mbps

**VQT663** - VAC Windows/Linux Agent, single license, 50Mbps

**VQT671** - VAC Android Agent, single license, 5Mbps

**NetTest Solution**

**VQT600** - Data Server

**VQT601** - Mobile Device Controller (MDC) Software

**VQT610** - Target Server

**VQT040** - WebViewer™

**VQuad™ Options**

**VQT010** - VQuad™ Software (Stand Alone)

**VQT241** - VQuad™ Dual UTA with Balanced, Analog FXO, PTT, and Phone Handset Interfaces

**VQT242** - VQuad™ Dual UTA Bluetooth option for controlling any Bluetooth® device (Call Control and Audio)

**VQT270** - VQuad™ Probe

**VQT and Analysis**

**VQT002** - Voice Quality Testing (PESQ only)

**VQT004** - Voice Quality Testing (PAMS, PSQM, PESQ)

**VQT006** - VQT w/ POLQA Server License

**VBA032** - Near Real-time Voice-band Analyzer

**EMU037** - Echo Measurement Utility (EMU) Software

For complete Video Quality Test Solution product list, refer to [http://www.gl.com/automated-video-quality-testing.html](http://www.gl.com/automated-video-quality-testing.html)